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a mapping data generating unit to read change data for changing at least one of the encrypting specifications in accordance with predetermined criteria received from the remote computer via the communication network, and to generate a mapping data object representing the structure of the encrypting circuit;

a changing unit, coupled to said circuit unit and said change data generating unit, to change automatically a structure of the encrypting circuit corresponding to the mapping data object by changing a circuit structure of the programmable logic device without removal from said encrypting apparatus; and

an enclosure substantially surrounding said circuit unit, said network connecting unit, said mapping data generating unit and said changing unit.

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6. (THREE TIMES AMENDED) The encrypting apparatus as set forth in claim 1, wherein said network connecting unit receives encrypted change data from the communication network, and said mapping data generating unit generates the encrypting circuit using the encrypted change data.

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10. (FIVE TIMES AMENDED) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:  
a circuit unit, having at least one programmable logic device, to form a decrypting circuit with the programmable logic device corresponding to given decrypting specifications;  
a network connecting unit to connect said decrypting apparatus to the communication network;  
a mapping data generating unit to read change data for changing at least one of the decrypting specifications in accordance with predetermined criteria received from the remote computer via the communication network, and to generate a mapping data object representing the structure of the decrypting circuit;

a changing unit, coupled to said circuit unit and said change data generating unit, to change automatically a structure of the decrypting circuit corresponding to the mapping data by changing a circuit structure of the programmable logic device without removal from said decrypting apparatus; and

an enclosure substantially surrounding said circuit unit, said mapping data generating unit and said changing unit.

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15. (THREE TIMES AMENDED) The decrypting apparatus as set forth in claim 10,

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wherein said network connecting unit receives decrypted change data from the communication network, and

wherein said mapping data generating unit changes the decrypting circuit corresponding to the decrypted change data.

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19. (FOUR TIMES AMENDED) A signal processing apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

circuit means, having at least one programmable logic device, for forming a circuit corresponding to given specifications;

mapping data generating means for reading change data from the remote computer via the communication network, for changing the specifications of the circuit in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit, the change data representing one of encrypting specifications or decrypting specifications;

changing means for automatically changing a structure of the circuit corresponding to the mapping data object; and

an enclosure substantially surrounding said circuit means, said mapping data generating means and said changing means.

20. (FOUR TIMES AMENDED) An encryption processing system for use with a communication system for exchanging encrypted data through a communication network connected to a remote computer at a remote location, comprising:

encrypting circuit means, having at least one programmable logic device, for forming an encrypting circuit corresponding to given encrypting specifications;

encryption mapping data generating means for reading encryption change data from the remote computer via the communication network, for changing the encrypting specifications in accordance with predetermined criteria and for generating an encryption mapping data object representing the structure of the encrypting circuit;

encryption changing means for changing the encrypting specifications and automatically changing a structure of the encrypting circuit corresponding to the encryption mapping data object;

decrypting circuit means, having at least one programmable logic device, for forming a decrypting circuit corresponding to given decrypting specifications;

decryption mapping data generating means for reading decryption change data from the remote computer via the communication network, for changing the decrypting specifications in accordance with the predetermined criteria and for generating a decryption mapping data object representing the structure of the decrypting circuit;

decryption changing means for changing the decrypting specifications and automatically changing a structure of the decrypting circuit corresponding to the decryption mapping data object; and

an enclosure substantially surrounding said encryption and decryption circuit means, said encryption and decryption mapping data generating means and said encryption and decryption changing means.

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21. (FOUR TIMES AMENDED) An encrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

encrypting means, composed of an unit of which circuit connections for encrypting data can be changed corresponding to an external command, for encrypting data;

mapping data generating means for reading change data from the remote computer via the communication network to change encrypting specifications in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit connections;

changing means for changing the circuit connections of said encrypting means corresponding to the encrypting specifications of the encrypting algorithm only when the encrypting specifications are changed based on the mapping data object; and

an enclosure substantially surrounding said encrypting means, said mapping data generating means and said changing means.

22. (FOUR TIMES AMENDED) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

decrypting means, composed of an unit of which circuit connections for decrypting data can be changed corresponding to an external command, for decrypting data;

mapping data generating means for reading change data from the remote computer via the communication network to change decrypting specifications in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit connections;

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changing means for changing the circuit connections of said decrypting means corresponding to the decrypting specifications of the decrypting algorithm only when the decrypting specifications are changed based on the mapping data object; and  
an enclosure substantially surrounding said encrypting means, said mapping data generating means and said changing means.

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F6

23. (FIVE TIMES AMENDED) An encrypting method, comprising:  
forming an encrypting circuit corresponding to given encrypting specifications with at least one programmable logic device;  
reading change data from a remote computer via a communication network, for changing the encrypting specifications; and  
automatically generating change data for changing the encrypting specification;  
and  
automatically changing a circuit structure of the at least one programmable logic device corresponding to the change data without removal of the at least one programmable logic device from the encrypting circuit.

24. (FIVE TIMES AMENDED) A decrypting method, comprising:  
forming a decrypting circuit corresponding to given decrypting specifications with at least one programmable logic device;  
reading change data from a remote computer via a communication network, for changing the decrypting specifications;  
automatically generating change data for changing the decrypting specification;  
and  
automatically changing a circuit structure of the at least one programmable logic device corresponding to the change data without removal of the at least one programmable logic device from the decrypting circuit.

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25. (THREE TIMES AMENDED) A signal processing method, comprising:  
forming a circuit corresponding to given specifications with at least one programmable logic device;  
automatically generating change data for changing the specifications of the circuit, the specifications representing one of encrypting specifications or decrypting specifications; and

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reading the change data from a remote computer via a communication network,  
and automatically changing a structure of the circuit corresponding to the change data.

Please ADD the following claims:

26. (NEW) An encrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

FB a circuit unit, having at least one programmable logic device, to form an encrypting circuit with the programmable logic device corresponding to given encrypting specifications;

a network connecting unit to connect said encrypting apparatus to the communication network; and

a changing unit to read change data from the remote computer for changing the encrypting specifications, and automatically to change the encrypting circuit corresponding to the change data.

27. (NEW) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

a circuit unit, having at least one programmable logic device, to form a decrypting circuit with the programmable logic device corresponding to given decrypting specifications;

a network connecting unit to connect said decrypting apparatus to the communication network; and

a changing unit to read change data from the remote computer for changing the decrypting specifications, and automatically to change the decrypting circuit corresponding to the change data.

28. (NEW) A signal processing apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

a circuit unit, having at least one programmable logic device, for forming a circuit corresponding to given specifications;

a network connecting unit to connect said signal processing apparatus to the communication network; and

a changing unit to read change data from the remote computer for changing the specifications of the circuit, the change data representing one of encrypting specifications and

decrypting specifications, and automatically to change the circuit corresponding to the change data.

29. (NEW) An encryption processing system for use with a communication system for exchanging encrypted data through a communication network connected to a remote computer disposed at a remote place, comprising:

an encrypting circuit unit, having at least one programmable logic device, to form an encrypting circuit corresponding to given encrypting specifications;

an encryption changing unit to read encryption change data from the remote computer for changing the encrypting specifications, and automatically to change the encrypting circuit corresponding to the encryption change data;

a decrypting circuit unit, having at least one programmable logic device, to form a decrypting circuit corresponding to given decrypting specifications; and

a decryption changing unit to read decryption change data from the remote computer for changing the decrypting specifications, and automatically to change the decrypting circuit corresponding to the decryption change data.

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(NEW) An encrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

an encrypting unit in which circuit connections for encrypting data can be changed in response to an external command;

a network connecting unit to connect the encrypting apparatus to the communication network; and

a changing unit for changing the circuit connections of said encrypting unit corresponding to specifications of an encrypting algorithm, read from the remote computer when the specifications are changed.

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(NEW) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

a decrypting unit in which circuit connections for decrypting data can be changed corresponding to an external command;

a network connecting unit to connect the decrypting apparatus to the communication network; and